KRYSENKO, N.S.; IL'YUSHKIN, N.D.; FEDOROV, Yu.P.; YASONOV, F.D.

Distribution of zinc, lead, copper and sulfur in the products of cake melting in shaft furnaces. Izv. vys. ucheb. zav.; tsvet. met. 4 no.5:97-100 '61. (MIRA 14:10)

1. Zavod "Ukrtsink". Rekomendovana kafedroy metallurgii tyazhelykh tsvetnykh metallov Severokavkazskogo gornometallurgicheskogo instituta.
(Zinc—Electrometallurgy)
(Electrometallurgy—By-products)

KRISENKO, N.S. [Krysenko, N.S.]; ILIUSKIN, N.D. [Il'yushkin, N.D.]; FEDOROV, I.P.; IASONOV, F.D. [Yasonov, F.D.]

Distribution of zinc, lead, copper, and sulfur in the products of the clinker melting in shaft furnaces. Analele metalurgie 16 no.2:78-81 Ap-Je '62.

YASOV, V.G.; USENKO, A.P.; BESSONOV, Yu.D.; SIRIK, V.F.

Influence of certain parameters on the characteristics of direct-action jet bit. Izv. vys. ucheb. zav.; neft' i gaz 6 no.10:19-23 '63. (MIRA 17:3)

1. Dnepropetrovskiy gornyy institut.

YASOV, V. G.

"On the Determination of Energy Losses in Turbine Drills When Operating on Water And Clay Solutions." Cand Tech Sci, Chair of Oil and Gas Well Drilling, Moscow Order of Labor Red Banner Petroleum Inst imeni Academician I.M.Gubkin, Min Higher EducationUSSR, Moscow, 1955. (KL, No 17, Apr 55).

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

YASOV, V.G.

Rheological parameters of weighted drilling fluids. Neft.khoz.33 [i.e.34] no.9:18-20 S '56. (MLRA 9:10)
(Oil well drilling fluids)

YASOV, V.G.

Power losses due to friction during rotary motion of disks of the turbodrill rotor in fluid. Azerb.neft.khoz. 35 no.3:20-22 Mr '56. (MLRA 9:10)

(Turbodrills)

YASOV, V.G., kand.tekhn.nauk

Calculating pump parameters for prospecting with use of a column-mounted turbodrill. Izv. DGI 30 no.1:49-55 '57. (MIRA 11:3)
(Turbodrills) (Mine pumps)

YASOV, V.G.

Experimental determination of fluid leakages in a turbodrill. Neft. khoz. 35 no.9:25-27 S '57. (MIRA 11:1)
(Turbodrills) (Oil well drilling fluids)

14(5) SOV/152-59-3-11/25

AUTHOR: Yasov, V. G.

TITLE: A New Method for the Determination of the Influence of Load and Number of Revolutions of the Drill Bit Upon the Mechanical Drilling Speed (Novaya metodika opredeleniya vliyaniya nagruzki i chisla oborotov dolota na mekhanicheskuyu skorost' bureniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, 1959, Nr 3, pp 51 - 54 (USSR)

ABSTRACT: The most favorable ratio between load and number of revolutions cannot be determined by laboratory experiments. Practical experiments are, however, difficult, time-consuming and do often lead - in the case of rapidly changing geological stratification - to contradictory results. A new method of rapid determination is suggested which bases upon the fact that the tube reacts under load like an elastic rod which in the case of lifted load expands in longitudinal direction (maximum side deformations amount to 1-2% of the longitudinal expansion and may be neglected). If a maximum load is applied to the drill bit and if the bit brace is retarded, the tube

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A New Method for the Determination of the Influence of Load and Number of Revolutions of the Drill Bit Upon the Mechanical Drilling Speed

SOV/152-59-3-11/25

will expand with growing depth of the borehole according to Hooke's law, the load of the drill bit will, however, decrease and entail a reduction of the drilling speed. For a short time (duration of the experiment about 1 1/2 minutes) this section of Hooke's curve may be assumed to be linear. Thus, a connection between load and drilling speed is obtained. This method is especially recommended for drilling into a depth of over 500 m and an average speed of 20 m/h. There are 1 figure, 1 table and 6 Soviet references.

ASSOCIATION: Dnepropetrovskiy gornyy institut (Dnepropetrovsk Mining Institute)

SUBMITTED: November 26, 1958

Card 2/2

YASOV, V.G.; VOLOKITENKOV, A.A.; KOPYTKO, Yu. , red.; IVANOVA, A.G., tekhn. red.

[Controlling lost circulation in prospecting drilling] Bor'ba s pogloshcheniem promyvochnoi zhidkosti pri burenii razvedochnykh skvazhin. Moskva, M-vo geologii i okhrany nedr SSSR, 1962. 51 p. (MIRA 17:4)

FILIPPOVA, Ye.S.; YASOV, V.G.; MUSIYENKO, I.A.; ARTSIMOVICH, G.V.; EPSHTEYN, Ye.F., prof., doktor tekhn. nauk; USENKO, A.P.; SIRIK, V.F.; SMIRNOV, L.V., otv. red.; KOSTON'YAN, A.Ya., red. izd-va; MAKSIMOVA, V.V., tekhn. red.

[Combination drilling of holes with hydraulic drills] Udarno-vrashchatel'noe burenie skvazhin gidroudarnikami. Moskva, Gosgortekhizdat, 1963. 83 p. (Boring) (MIRA 16:5)

YASOV, V.G.; FEDOROVA, L.N., ved. red.

[Eliminating the absorbtion of drilling fluids during the boring of exploratory boreholes] Likvidatsiia pogloshcheniia promyvochnoi zhidkosti pri burenii razvedochnykh skvazhin. Moskva, Nedra, 1964. 99 p. (MIRA 17:9)

YASOV, V.G.; MUSIYENKO, I.A.

Methods of calculating the SUGI-L hydraulic percussion drill with reciprocating motion. Izv. DGI 42:45-52 '64. (MIRA 18:11)

PAL'YANOV, P.F.; YASOV, V.G.

Increasing the drilling rate and the efficiency of boring machinery. Izv. DGI 42:63-66 '64. (MIRA 18:11)

EPSHTEYN, Ye.F.; YASOV, V.G.; SIRIK, V.F.; BESSONOV, Yu.D.

Methods for the selection of a free-running hydraulic hammer of direct action. Izv.vys.ucheb.zav.; geol. i razv. 8 no.10:144-147 O '65. (MIRA 19:1)

1. Dnepropetrovskiy gornyy institut.

YASOV, V.G.

Methodology of designing a direct-action hydraulic hammer.
Izv. vys. ucheb. zav.; neft' i gaz. 7 no.10:33-38 '64.
(MIRA 18:2)

1. Dnepropetrovskiy gornyy institut.

ACCESSION NR: AP5017[illegible]

AUTHOR: Yasovskiy, S. R.; Ur'yev, N. B.; Mikhaylov, K. V.

TITLE: Dispersion (fluffing) of asbestos fiber subjected to vibrations

SOURCE: AN SSSR. Doklady, v. 162, no. 5, 1965, 1119-1121

TOPIC TAGS: asbestos, vibrational dispersion, fluffing, surfactant

ABSTRACT: The dispersion of asbestos under the influence of vibration and of an adsorbed surfactant (calcium hydroxide solution) was studied on an M-10 vibro mill at a [illegible] and a vibration amplitude of 1.7 mm. The results were evaluated by three methods: (1) Determination of the specific surface of the dispersed and dispersed asbestos by means of air permeability. (2) A microscopic method for determining the content of fiber fractions of different thicknesses. (3) An indirect method of estimating the influence of the dispersity of asbestos on structuration in suspensions of the cement - asbestos - water system. It is concluded that the use of effective vibration combined with additions of a surfactant [$Ca(OH)_2$] considerably accelerates the process of disaggregation (dispersion) of structurized fibrous systems such as asbestos. The quality of the

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L 59596-65
ACCESSION NR: AP5017462

fluffing produced by applying a vibrational field is higher than that produced by any other existing dispersion method. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 19Nov64 ENCL: 00 SUB CODE: MT

NO REF SOV: 011 OTHER: 000

Card 2/2

YASPATSOV V.S.

Country : USSR
CATEGORY : Pharmacology, Toxicology. Tranquilizers

ABS. JOUR. : RZBiol., No. 12 1958, No. 56649

AUTH. : [illegible]

INST. : [illegible]

TITLE : [illegible] Action of Aminazine on Gastric Secretion

ORIG. PUB. : Tr. Smolenskogo med. in-ta, 1957, Vol.6, 91-100

ABSTRACT : In dogs, aminazine (2, 5, and 10 mg/kg) produces, both in the first phase and in the second phase of gastr. secretion, a reduction in the amount of gastric juice, total and free HCl, and enzyme. The action of the preparation from several hours to days and is independent of the dose administered. -- A.V.Stolyarov

CARD: 1/1

YASSIYEVICH, G. N.

SOV/124-58-11-13183

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 188 (USSR)

AUTHOR: Yassiyevich, G. N.

TITLE: The Mechanism of the Redistribution of Stresses in Rock Strata Resulting From Mine Workings (Mekhanizm pererаspredeleniya napryazhennogo sostoyaniya gornykh porod pri provedenii gornykh vyrabotok)

PERIODICAL: Sb. nauchn. rabot stud. Leningr. gorn. in-ta, 1957, Nr 2, pp 94-102

ABSTRACT: Discussion of a method for the analysis of the stress distribution in rock strata based on the examination of the changes in the magnitude of their specific deformation energy. Considerations are adduced on the possibility of utilizing the given method for the determination of strain rates and the displacements of the surface of the workings.

G. A. Geniyev

Card 1/1

GUREVICH, L.E.; YASKIYEVICH, I.N.

Anomalous Hall effects and Nernst effects in metals with paramagnetic impurities. Fiz. tver. tela 7 no.2:582-590 F '65. (MIRA 18:8)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

S/181/62/004/010/034/063
B102/B112

AUTHORS: Gurevich, L. E., and Yassiyevich, I. N.

TITLE: Theory of the ferromagnetic Hall effect

PERIODICAL: Fizika tverdogo tela, v. 4, no. 10, 1962, 2854 - 2866

TEXT: A theory of the ferromagnetic Hall effect (FHE) is developed for ferromagnetic metals and atomic semiconductors since no general theory has hitherto been known. Only Luttinger (Phys. Rev. 112, 739, 1958) has studied quantitatively metals with inversion centers in the unit cell and calculated the FHE for T = 0. $I = I_z$, $B = B_z$ and $M = M_z$ are assumed for the current, the mean microscopic magnetic field, and the magnetization, respectively so that the equation $\vec{I} = \sigma\vec{E} + (\sigma'_B/B)[\vec{E}\vec{B}] + (\sigma'_M/M)[\vec{E}\vec{M}]$ which holds for the total current can be reduced to $E_y/I = R_B B + R_M M$ $= (\sigma'_B+\sigma'_M)/[\sigma^2+(\sigma'_B+\sigma'_M)^2]$. R_B and R_M are the ordinary and the ferromagnetic Hall constants which are determined by the different types of carriers. The FHE is caused by the weak spin-orbit interaction of the conduction

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electrons and depends on the different scattering and the different number of carriers with spins of different orientations. The degree of spin ordering of the conduction electrons is determined by the sum A of the exchange integrals. If electrons from different bands participate in the conduction, these exchange integrals may have different signs. For the s and d electrons of metals e.g., $A_d < 0$ and $A_s > 0$, i.e. the temperature dependent effects may be superimposed and the FHE may change its sign at a certain temperature. In semiconductors the holes (ferromagnetic band d) and the electrons (band s) are the carriers of the two zones. The studies were made over a wide range of temperature on the assumption that $\omega\tau \ll 1$, where $\omega = eB/mc$ and τ is the relaxation time. Separate studies were made for crystals with (B') and without (A') inversion center in the unit cell. For the latter the electron energy spectrum is assumed isotropic. First, the kinetic equation is set up and the Hall current $I = \frac{e}{V} Sp(\vec{v}^1 f^0 + \vec{v}^0 f^1)$ is calculated. $f = f^0 + f^1$ denotes the deviation from the equilibrium density ($\varrho = \varrho_0 + f$, ϱ_0 is the Gibbs distribution), $\vec{v} = \vec{v}^0 + \vec{v}^1$ is the velocity operator ($\vec{v} = \frac{i}{\hbar}[\vec{H},\vec{r}]$); if I is separated into I_n and I_d in correspondence

Theory of the ferromagnetic...

with the off-diagonal and the diagonal elements of the density matrix, then expressions of the form

$$I_d = -\left(\frac{e}{V}\right)\sum\left(v^1(ip, ip) f^0_{ip} + v^0_{ip}(W^0_{ip, i'p'})^{-1} R^1_{i'p'}\right), \qquad (2, 12)$$

$$I_s = -\left(\frac{e}{V}\right)\sum\left\{\left[\frac{v^1(ip, i'p)}{\omega_{ii'}(\mathbf{p})}\right][R^0_{ii'}(p) + W^{0jj}_{ii'}(p, p') f^0_{jp'}] + \right.$$
$$+\left[\frac{v^0(ip, i'p)}{\omega_{ii'}(\mathbf{p})}\right][R^1_{ii'}(p) + W^{0jj}_{ii'}(p, k)(W^0_{jk, j'k'})^{-1} R^1_{j'k'} +$$
$$\left. + W^{1jj}_{ii'}(p, k) f^0_{jk}]\right\}. \qquad (2, 13)$$

are obtained where

$$\sum W^0_{ii'}(\mathbf{p}, \mathbf{p}') f^0_{i'p'} = -R^0_{ip}, \qquad (2, 8)$$

$$\sum W^0_{ii'}(\mathbf{p}, \mathbf{p}') f^1_{i'p'} = -[R^1_{ip} + \sum W^1_{ii'}(\mathbf{p}, \mathbf{p}') f^0_{i'p'}] = \bar{R}^1_{ip}, \qquad (2, 9)\ ;$$

$$W_{ii}(\mathbf{p}, \mathbf{p}') = W^{i'i'}_{ii}(\mathbf{p}, \mathbf{p}');$$

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f_{ip} and R_{ip} are the diagonal parts of f and R, $R = R^0+R^1$. In addition, the ferromagnetic Hall current is studied for limiting cases of higher and lower temperatures. In the former case, $I_\alpha \approx \gamma\sigma ME/\tilde{M}$ for (A') and $I_\alpha \approx \gamma\sigma\tau ME/\tau_D\tilde{M}$ for (B') where $\tilde{M} = \zeta/A$, ζ is the Fermi energy, is obtained under the assumption that there is only one type of carriers. Hence

$$R_M = \gamma\frac{m}{ne^2\tilde{M}}\left(\eta_1\frac{1}{\tau_D}+\eta_2\frac{1}{\tau_D}\frac{\hbar}{\tau_F\xi}+\eta_3\frac{1}{\tau_F}\frac{\hbar}{\tau_F\xi}+\eta_4\frac{1}{\eta}\frac{\hbar}{\tau\sqrt{\xi\Delta}}\right), \quad (5,1)$$

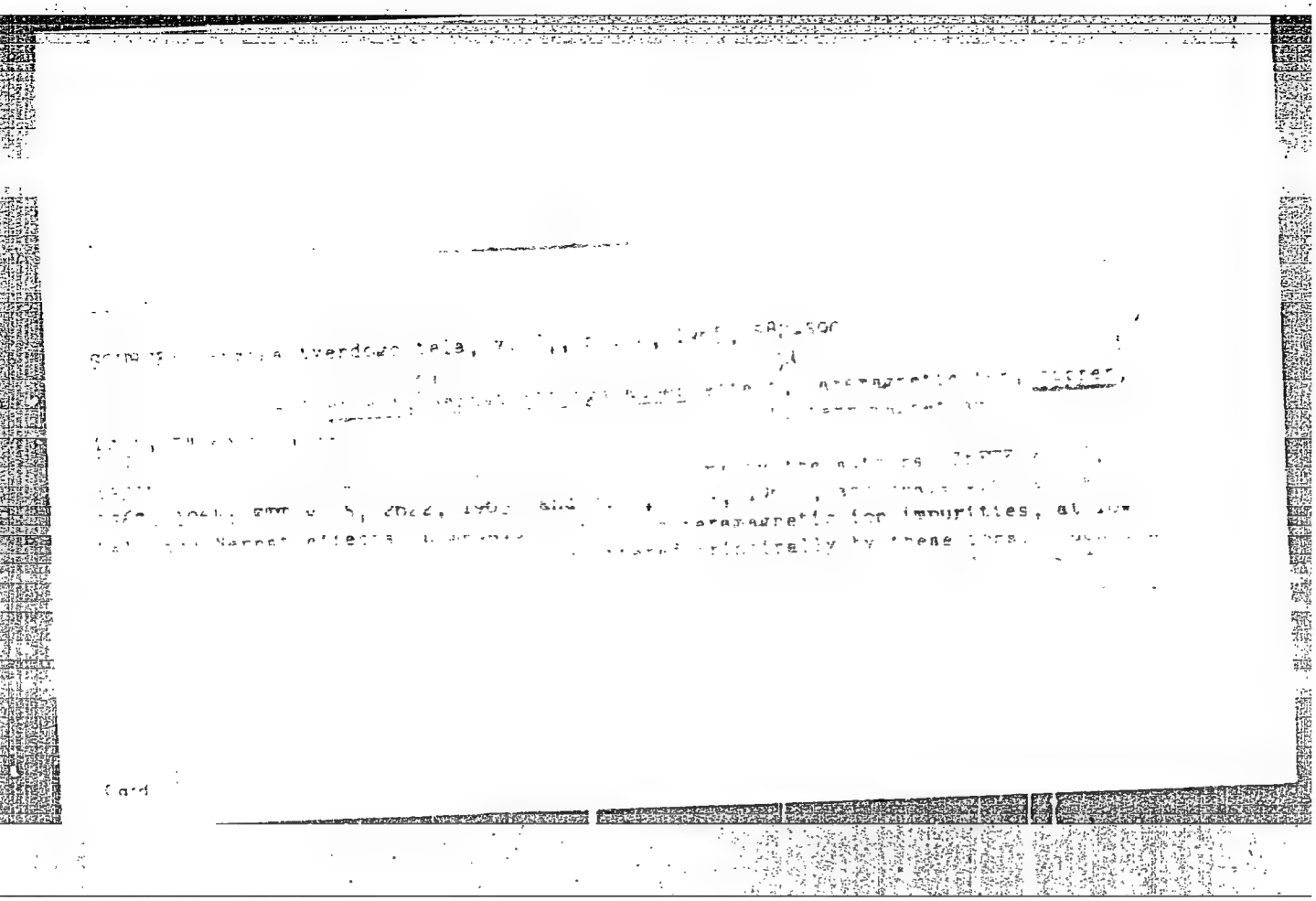
and

$$\frac{R_M}{R_B} = \gamma\frac{mc}{e\tilde{M}}\left(\eta_1\frac{1}{\tau_D}+\eta_2\frac{1}{\sigma_D}\frac{\hbar}{\tau_F\xi}+\eta_3\frac{1}{\tau_F}\frac{\hbar}{\tau_F\xi}+\eta_4\frac{1}{\tau}\frac{\hbar}{\tau\sqrt{\xi\Delta}}\right). \quad (5,2)$$

are obtained for (A'). η_i are the numerical coefficients ($\gtrsim 0$). At high temperatures $R_M/R_B \sim (M\tau_F^2\bar{\varepsilon})^{-1}$, $\tau_F \ll \tau_D$. There are 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: March 22, 1962 (initially)
May 30, 1962 (after revision)



ACCESSION NR: [illegible]

[illegible] near the Curie point have shown that both [illegible]

[illegible] Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad

[illegible] Institute AN SSSR

L 13491-65 EWT(d)/EWT(l)/EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWA(d)/EWP(t)/EWP(b)
Pr-4/Pu-4 IJP(c)/AFWL/AFETR/SSD/ASD(a)-5 JD/WW

ACCESSION NR: AP4047904 S/0056/64/047/004/1367/1377

AUTHORS: Gurevich, L. E.; Yassiyevich, I. N.

TITLE: Kinetic properties of metals with paramagnetic impurities at low temperatures

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 4, 1964, 1367-1377

TOPIC TAGS: low temperature research, electric conductivity, thermal emf, metal property, paramagnetic impurity

ABSTRACT: The electrical conductivity and thermal emf tensors are derived for metals in which the electrons are scattered by paramagnetic impurity ions oriented completely or partly by an external magnetic field. The cases of an electric field parallel and perpendicular to the magnetic field are considered. In the case of a parallel electric field the electric conductivity increases and ap-

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ACCESSION NR: AP4047904

proaches saturation with increasing magnetic field intensity, while the thermal emf does not vanish in the zeroth approximation in the degeneracy, but has an extremum when the orientation energy of the ions is equal to the thermal energy. The thermal emf tends to zero like $e^{-\eta}$ ($\eta = \mu_0 gHT$). In the case of an electric field perpendicular to the magnetic field the normal and whole electric conductivities can have maxima as functions of the magnetic field, while the longitudinal and transverse thermal emf have two extrema between which they reverse sign. In either case the maximum thermal emf may reach a value equal to the reciprocal of the electron charge. Orig. art. has: 53 formulas and 4 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute, Academy of Sciences, SSSR)

SUBMITTED: 07Mar64

SUB CODE: EM, MM NR REF SOV: 002 ENCL: 00

OTHER: 004

Card 2/2

L 14843-65 EWT(1) IJP(c)/AFWL/SSD/AS(mp)-2/AFMDT/ESD(c)/ESD(gs)/ESD(t)

ACCESSION NR: AP4048410 S/0181/64/006/011/3341/3347

AUTHORS: Gurevich, L. E.; Yassiyevich, I. N.

TITLE: High-frequency ferromagnetic Faraday and Kerr effects 21

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3341-3347

TOPIC TAGS: Hall effect, Faraday effect, Kerr effect, spin orbit interaction

ABSTRACT: The authors investigate the high-frequency ferromagnetic Hall conductivity which causes the ferromagnetic Faraday and Kerr effects away from the interband resonance. Spatial dispersion is neglected. It is shown that at high frequencies the usual kinetic equation for the diagonal distribution function is not sufficient, and that terms due to the off-diagonal terms of the density matrix must be taken into account. The contribution of these terms is evaluated. It is shown that there are two frequency regions in which

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L 14843-65

ACCESSION NR: AP4048410

the ferromagnetic Hall conductivity has different properties. At lower frequencies the ratio of the imaginary parts of the ferromagnetic and ordinary Hall conductivities is equal to the ratio of the real parts and is the same as in the case when the ferromagnetic Hall effect is due to asymmetrical scattering by magnons or defects. At higher frequencies the ratios are not equal. "The authors thank A. I. Voloshinskiy who pointed out the change in the role of interband transitions in the high-frequency case." Orig. art. has: 34 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 28May64 ENCL: 00

SUB CODE: SS, EM NR REF SOV: 005 OTHER: 003

Card 2/2

GUREVICH, L.E.; YASSIYEVICH, I.N.

Theory of the ferromagnetic Hall effect. Fiz. tver tela 5 no.9: 2620-2626 S '63. (MIRA 16:10)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR, Leningrad.

ACC NR: AT6033544 SOURCE CODE: UR/0181/66/008/010/2853/2858

AUTHOR: Nasledov, D. N.; Popov, Yu. G.; Smetannikova, Yu. S.; Yassiyevich, I. N.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Intrinsic photoconductivity and photomagnetic effect in p-InSb following electron heating

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2853-2858

TOPIC TAGS: photoconductivity, indium compound, antimonide, photomagnetic effect, carrier lifetime, relaxation process, electron energy

ABSTRACT: In view of the fact that earlier research has not established conclusively whether the optically induced oscillations of the photomagnetic effect and of the photoconductivity are connected with the oscillatory dependence of the lifetime of the nonequilibrium carriers or with heating of the carriers, the authors have carried out a simultaneous investigation of the photoconductivity and the photomagnetic effect in p-InSb samples to prove that the oscillations are due to electron heating. The photomagnetic and photoconductivity currents were measured at 5 - 8K using a procedure described earlier (FTT v. 5, 5031, 1963). The p-type samples were obtained by zone purification, and some of the samples were doped with copper to enhance the oscillation effect. The test results shown that the connection between mobility and the diffusion coefficients agrees in order of magnitude with the usual Einstein rela-

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ACC NR: AP6033544

tion, except that the crystal temperature must be replaced by the electron energy. The analysis has shown good agreement between this theory and the experimentally obtained spectral dependences of the photoconductivity and the photomagnetic effect at 6K. A method is proposed for determining the energy dependence of the lifetime and relaxation time of the nonequilibrium electrons from the form of the oscillation peaks of the photomagnetic effect. It is planned to obtain in the future a quantitative comparison of the experimental results with the theory. Orig. art. has: 3 figures and 21 formulas.

SUB CODE: 20/ SUBM DATE: 22Jan66/ ORIG REF: 003/ OTH REF: 006

Card 2/2

YASSKIY, D.I.

25

PHASE I BOOK EXPLOITATION SOV/5458

Girshovich, Naum Grigor'yevich, Doctor of Technical Sciences, Professor, ed.

Spravochnik po chugunnomu lit'yu (Handbook on Iron Castings) 2d ed., rev. and enl. Moscow, Mashgiz, 1961. 800 p. Errata slip inserted. 16,000 copies printed.

Reviewer: P. P. Berg, Doctor of Technical Sciences, Professor; Ed.: I. A. Baranov, Engineer; Ed. of Publishing House: T. L. Leykina; Tech. Eds.: O. V. Speranskaya and P. S. Frumkin; Managing Ed. for Literature on Machine-Building Technology (Leningrad Department, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This handbook is intended for technical personnel at cast-iron foundries. It may also be of use to skilled workmen in foundries and students specializing in founding.

COVERAGE: The handbook contains information on basic problems in the modern manufacture of iron castings. The following are discussed: the composition and properties of the metal; the making of molds; special casting methods; the charge preparation; melting

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Handbook on Iron Castings SOV/5458

and modifying the cast iron; pouring, shaking out, and cleaning of castings; heat-treatment methods; and the inspection and rejection of castings. Information on foundry equipment and on the mechanization of castings production is also presented. The authors thank Professor P. P. Berg, Doctor of Technical Sciences, and staff members of the Mosstankolit Plant, headed by the chief metallurgist G. I. Kletskin, Candidate of Technical Sciences, for their assistance. References follow each chapter. There are 287 references, mostly Soviet.

TABLE OF CONTENTS:

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32793
S/137/61/000/012/077/149
A006/A101

18 5100 1496 1413 1454

AUTHORS: Yasskiy, D.I., Mikotin, Ye.Ye.

TITLE: The advanced process of manufacturing cast iron sheets and improvement of their quality

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 6-7, abstract 12D42 (V sb. "Polucheniye izdeliy iz zhidk. met. s uskoren. kristallizatsiyey", Moscow-Kiyev, Mashgiz. 1961, 169 - 180)

TEXT: The experimental research work of TsKTB made it possible to develop a mechanized high-efficiency production line for the manufacture of thin cast-iron sheets and to bring about an advanced technology of cold rolling. The optimum chemical composition of cast iron is (in %): C 3.2-3.4; Si 1.4-1.7; Mn 0.4-0.7; P $\leq$ 0.12; S $\leq$ 0.1; Cu 0.15-0.25. The cast iron is melted in a cupola furnace with a forehearth with two rows of tuyeres and water cooling. Continuous forming of the strip during the casting of cast iron from a 2-ton-ladle is assured by increasing the diameter of the crystallizer rolls to 420-520 mm and by bringing the consumption of water cooling the crystallizer-rolls, to 15-20 l/sec at a free discharge of the water through two journals of the crystallizer rolls. The

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S/137/61/000/012/077/149
A006/A101

The advanced process ...

wall thickness of crystallizer rolls was increased to 20-30 mm when manufacturing 1.3-1.5 mm thick sheets. The crystallizer rolls were cleaned from cast-iron particles with rotating steel brushes; this raised the durability of crystallizer rolls by a factor of 4 - 6 and reduced their consumption to 1.5 kg/ton of the product. The author states the expediency of casting the cast-iron not on the surface of the lower crystallizer roll, but directly in the space between the rolls; the feeder is elevated above the lower crystallizer roll and the inclination angle of the axial plane of the crystallizer roll is reduced to 30°. A stopper casting device was developed, representing a ladle with an electric-heated foundry system, functioning from a welding transformer through water-cooled contacts; the heating temperature is $\leq$ 1,500°C at 30 - 50 v voltage and 400 - 550 amps current intensity. The design and technical and economical characteristics of a mechanized ПЧЛ (PChL) unit are described. The unit is intended for the manufacture of sheets of 640x1,200x(0.7-1.0) mm and thin cast-iron sheets (1.3-2 mm) with 3-4 mm high ribs. It is shown that during the formation process in continuous casting, a heat equilibrium is established and the temperature of the crystallizer rolls is stabilized. Mechanized gas-fuelled tunnel furnaces are recommended for annealing cast-iron sheets.

[Abstracter's note: Complete translation]

V. D'yakov

Card 2/2

S/137/61/000/011/089/123
A060/A101

AUTHORS: Taran, Yu. N., Progrebnoy, E. N., Yasskiy, D. I.

TITLE: On the crystallization mechanism of cast iron in revolving crystallizer rolls

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 3-4, abstract 11I14 (V sb. "Polucheniye izdeliy iz zhidk. met. s uskoren. kristallizatsiyey". Moscow-Kiyev, Mashgiz, 1961, 197-210)

TEXT: The authors cite the results of an investigation devoted to the study of the influence of the forming parameters upon the structure and the characteristics of cast iron sheet. The structural base of the cast iron sheet is formed by a ramified lattice of austenite dendrites, ledeburite inclusions are comparatively rarely encountered also in the middle of the sheet. As one recedes from the central zone, the size of the dendrites increases and at the edge portions of the sheet it is possible to observe the formation of large giant crystals with perfect dendrite form. The nucleation and growth of such crystals occurs in a wedge of molten metal without connection with crystallization of the surface films. The completion of their growth occurs in those

Card 1/2

On the crystallization mechanism ...

portions of the melt which, in flowing over the roller surface, maintain the contact with that surface for a long time. In the process of growing, the large, little ramified dendrites of austenite deplete the surrounding liquid solution of Fe and in the interdendritic spaces ledeburite inclusions with fine structure are formed. Under high forming pressures, there is formed a nonuniform (over the sheet length) three-layered structure, which has a deleterious effect upon the characteristics of the sheet. It was established that the optimal interval of the roll pressure magnitude is from 60 to 130 kg/running cm of the sheet width. Forming of the sheet in this interval guarantees the sufficiently homogeneous structure and satisfactory mechanical characteristics of the sheet.

A. Savel'yeva

[Abstracter's note: Complete translation]

Card 2/2

S/2917/63/000/267/0005/0011

ACCESSION NR: AT4028410

AUTHOR: Bilik, Sh. M. (Doctor of Technical Sciences); Yassen, Yu. B. (Engineer)

TITLE: Friction surfaces of plastics in the case of great augmentation.

SOURCE: Moscow. Vsesoyuzny*y nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. Trudy*, No. 267, 1963. Primeneniye polimerov v podvizhnom sostave zhelezny*kh dorog (using polymers in railroad rolling stock), 5-11

TOPIC TAGS: plastic, surface friction, polymers, antifriction material, heat conductivity, shock viscosity, polyamides, replica, electron microscope, teflon

ABSTRACT: A number of polymers used as antifriction materials show the tendency toward crystallization, although they have an amorphous as well as a crystalline structure inherent in them. This is found in caprolactam and other polyamides, polyethylene and complex polyethers. The characteristic structure of a polymer is mainly caused by the heating and cooling of the polymer mass during the formation process. The surfaces of plastics are investigated by the counter bodies of different roughness by means of microphotographs and electronic methods. Electron microscopic investigation was conducted by studying replicas taken from the surfaces of polymer samples before and after their abrasion by a polished disc, a ground disc,

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ACCESSION NR: AT4028410

"mikronka" abrasive cloth and KZ-180 abrasive paper. After the samples were subjected to friction, carbon films were applied to the surface by means of vacuum spraying. The films were separated from the polymer with the aid of gelatin. After washing the replica the images were tinted with chromium for increased contrast. The replicas were then photographed in the electron microscope EM-5 which has a resolving power of 20 Å and a magnification of up to 90,000 times. Based on the electron microscopic research, the authors reached the following conclusions: 1) a strict flexible abrasion mechanism does not exist in the case of steel-plastic couplings. Elastic surface contacts are always accompanied by a pliable component, primarily by plastics; 2) the abrasion mechanism called flexible above should be more properly called suito flexible; 3) the orientation of the submicro-smoothnesses that appeared in teflon, viniplast and polycarbonate coincides with the direction of the friction. Orig. art. has: 5 figures.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All Soviet Railroad Scientific Research Institute)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: MA NO REF SOV: 009 OTHER: 004

Card 2/2

ACCESSION NR: AT4028411 S/2917/63/000/267/0012/0024

AUTHOR: Bilik, Sh. M. (Doctor of Technical Sciences); Yasson, Yu. B. (Engineer)

TITLE: Adhesion of some polyamide films to metals and alloys

SOURCE: Moscow. Vsesoyuzny*y nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. Trudy*, No. 267, 1963. Primeneniye polimerov v podvizhnom sostave zhelezny*kh dorog (using polymers in railroad rolling stock), 12-24

TOPIC TAGS: adhesion, polyamide film, antifriction material, capron, lamination, duraluminum, steel, brass, bronze, epoxy resin

ABSTRACT: Polyamides are used as antifriction materials in a number of machines and instruments. The use of polyamides make it possible to economize on nonferrous metals and in a number of cases to increase the life span of friction couplings. Capron applied to a metal body of a bearing in the form of a thin layer covering has a number of advantages in comparison with thick walled, cast bushings. The adhesion properties of capron and polymer films to a metal lining was tested on a number of metals, including steel, brass, bronze, anodized and unanodized duraluminum. The authors show the difference in adhesive properties with the introduction of several additives. The results of the tests are presented in graphs and tables. The authors

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ACCESSION NR: AT4028411

also use an intermediate layer of epoxy resin to bind the film to the metal. The results of this adhesion are also given in tables. Orig. art. has: 6 tables and 6 figures.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All Soviet Railroad Scientific Research Institute)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: MA NO REF SOV: 003 OTHER: 000

Card 2/2

YASSON, Yu.B., inzh.

Investigating the secondary structure of the films of graft resins.
Trudy TSNII MPS no.283:108-118 '64.
(MIRA 18:4)

ACCESSION NR: AT4028412 S/2917/63/000/267/0025/0037

AUTHOR: Yasson, Yu. B. (Engineer)

TITLE: The contact characteristic of some polymer materials after friction with bodies of varying coarseness

SOURCE: Moscow. Vsesoyuzny*y nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. Trudy*, No. 267, 1963. Primeneniye polimerov v podvizhnom sostave zhelezny*kh dorog (using polymers in railroad rolling stock), 25-37

TOPIC TAGS: polymer, antifriction material, copolymer, contact area, counter body

ABSTRACT: The author studies the actual contact area of a number of polymers and copolymers for the purpose of proper selection of material and design for friction joints. In his research, the author utilized formulas from previous works, notably G. M. Bartenev (O zakone treniya vy*sokoelastichny*kh materialov po tverdy*mgladkim poverkhnostyam. Doklady* AN SSSR, 1955, vol. 103, no. 6. On the friction law of highly elastic materials on hard smooth surfaces) and G. M. Bartenev and V. V. Lavrent'yev (Doklady* AN SSSR, 1961, vol. 141, p. 33[illegible]). These formulas are used to plot graphs for various polymers and copolymers. The author deduces that the formation of the actual contact area of the investigated polymers is determined by

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ACCESSION NR: AT4028412

the physical mechanical properties of the materials, as well as the surface roughness of the counter body with which the polymer makes contact. Variations in load and friction speed of the polymer materials do not change essentially the character of subsequent formation of the contact area between polymers and a counter body of high purity. Orig. art. has: 10 figures and 5 formulas.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All Soviet Railroad Scientific Research Institute)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: MA NO REF SOV: 006 OTHER: 003

Card 2/2

YASTEREBOVA, Lidiya Nikolayevna; GANYUSHIN, A.I., red.; DONSKAYA, G.D., tekhn. red.

[Methods for the stabilization of heavily wetted soils with organic binders] Metody ukrepleniia pereuvlazhnennykh gruntov organicheskimi viazhushchimi. Moskva, Avtotransizdat, 1962. 31 p. (MIRA 15:5)

(Soil stabilization)

KOCHO, V.S.; BARZILOVICH, V.S.; LYADOV, K.P. Prinimali uchastiye: MRYKHINA, V.I., inzh.; OMEL'CHENKO, T.Ye., tekhnik; SHAKARIMOV, Yu., student; YASTOCHKIN, A.I., student; ULANOVSKAYA, L.V., student

Investigating the operation of continuous furnaces with a rolling hearth. Stal' 24 no.2: 177-179 F '64. (MIRA 17:9)

1. Kiyevskiy politekhnicheskiy institut i Kommunarskiy metallurgicheskiy zavod.

L 21550-66 EWT(m)/T DJ

ACC NR: AP6006310 (A) SOURCE CODE: UR/0413/66/000/002/0020/0021

AUTHORS: Gor'yev, A. S.; Ivanov, V. M.; Yastreb, Ye. F.

ORG: none

TITLE: A device for regulating the flow rate of a mixture of components. Class 12, No. 177312

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 20-21

TOPIC TAGS: flow regulator, flow control

ABSTRACT: This Author Certificate presents a device for regulating the flow rate of a mixture of components, for example, the flow rate resulting with the mixing of a bulk carrier substance with a pigment. The device includes a slave hydraulic drive connected with a system of oil lines. These oil lines are fitted with a safety valve and a pump. The device also has an oil tank (see Fig. 1). The design maintains the homology of the mixture flow rate at a rigid ratio of the components. A chamber with a membrane is established in the mixture pipeline. The membrane interacts with a separating chamber the shaft of which is connected with a throttle valve mounted in the oil line between the slave hydraulic drive and the oil tank.

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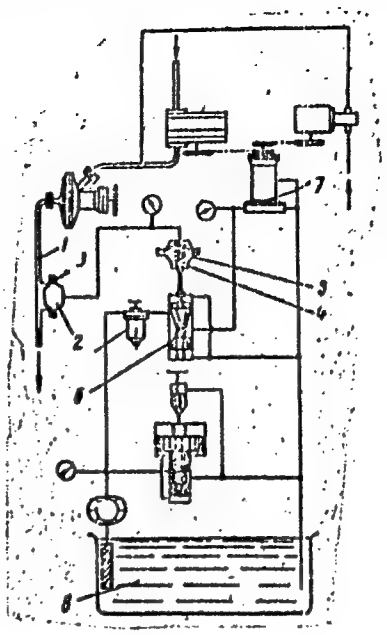
UDC: 621.646.3.002.612.3

L 24550-66

ACC NR: AP6006310

Fig. 1. 1 - pipeline; 2 - chamber; 3 - membrane; 4 - separating chamber; 5 - shaft; 6 - throttle valve; 7 - slave hydraulic drive; 8 - oil tank.



Orig. art. has: 1 figure.

SUB CODE: 13, 14/ SUBM DATE: 30Mar64

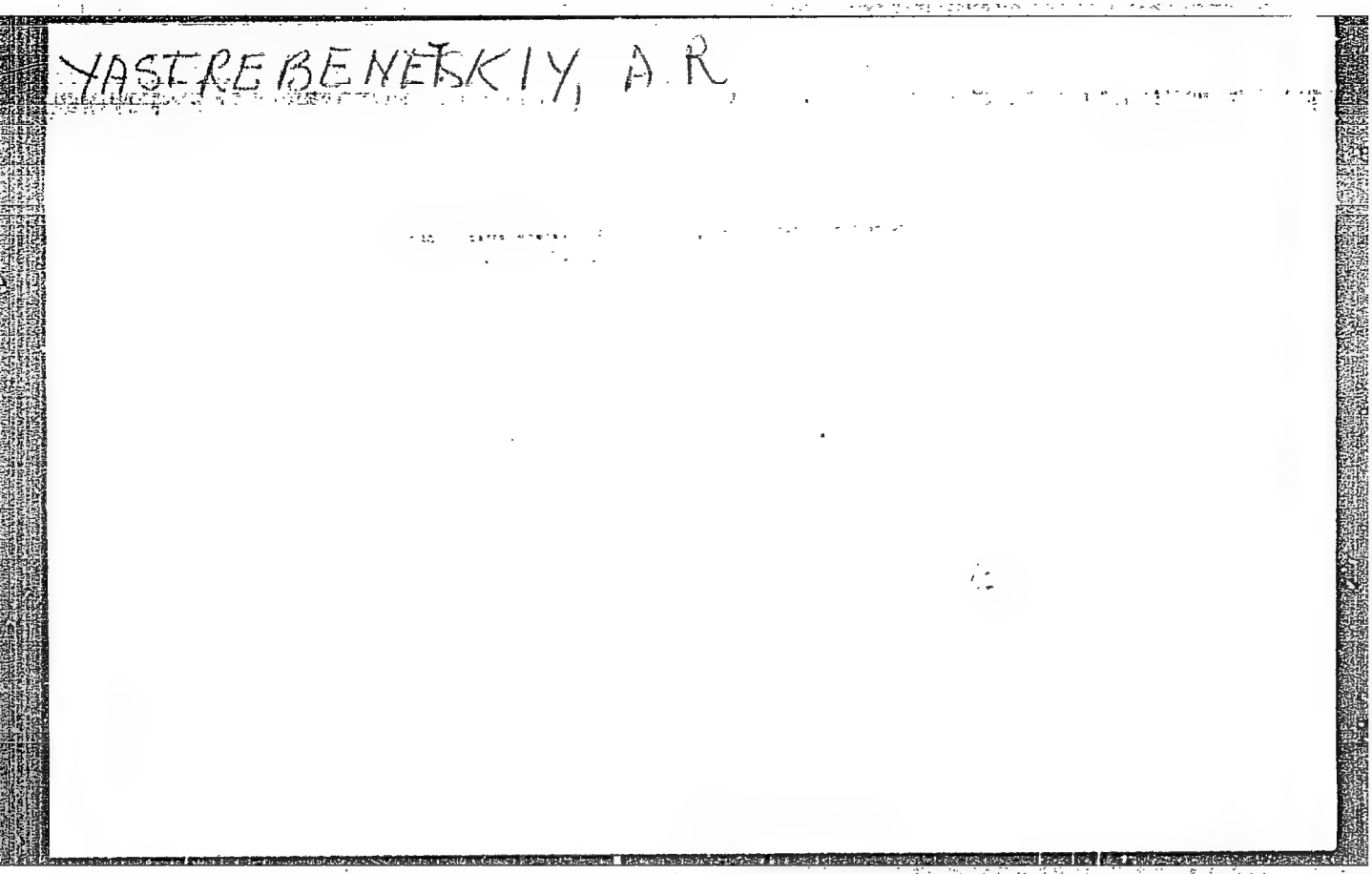
Card 2/2 WJS

YASTREBENETSKIY, A. R.

Chemical Abstracts
May 25, 1954
Acids, Alkalies and
other Heavy Chemicals

Condensation of water vapor from ammonia-burner gases. V. I. Atroshchenko and A. R. Yastrebenetskii [V. I. Lenin Politech. Inst., Kharkov]. *Zhur. Prikład. Khim.* 26, 251–7(1953).—Gases from an ammonia burner are cooled in a jacketed pipe 10–15 mm. inside diam., lowering the temp. of the gas from 160–200 to 25–30° in a short time, *t*, in sec. The percentage HNO_3 in the condensate is, within a small error, expressed by $C = 8.00t + 0.4$. It is concluded that the rate of acid forming in the heat exchanger at atm. pressure is not dependent so much on oxidation of the lower oxides as on the rate of H_2O condensation and the reaction of the gases with the condensate. For a 98% acid, 64% of the H_2O is condensed in 0.2–0.25 sec. of gas residence in the cooler; the acid concn. in the condensate is 2–3% and the addnl. energy required is 2 kw. hr./ton of acid produced.

I. Bencowitz



APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001962230005-3"

YASTREBENETSKIY, A.R., kand. tekhn. nauk; KOVALENKO, L.M., inzh.

Investigating heat transmission and hydraulic resistance of plate-type heat exchangers. Khim. mash. no.2:29-31 Mr-Ap '59.
(MIRA 12:7)

(Heat exchangers)

ATROSHCHENKO, Vasiliy Ivanovich; GEL'PERIN, Iosif Il'ich; ZASORIN, Anatoliy Petrovich; KONVISAR, Viktor Ivanovich; KRAYNYAYA, Antonina Yakovlevna; LEYBUSH, Agnessa Grigor'yevna; YASTREBENETSKIY, Anisim Rudol'fovich; VAYNBERG, D.A., red.; ZADOROZHNYY, V.S., tekhn.red.

[Calculation methods in the technology of combined nitrogen] Metody raschetov po tekhnologii sviazannogo azota. Pod obshchei red. V.I. Atroshchenko. Khar'kov, Izd-vo Khar'kovskogo gos.univ., 1960. 302 p. (MIRA 14:4)

(Nitrogen)

YASTREBENETSKIY, A.R.

PHASE I BOOK EXPLOITATION SOV/5604

Atroshchenko, Vasiliy Ivanovich, Iosif Il'ich Gel'perin, Anatoliy Petrovich Zasorin, Viktor Ivanovich Konvisar, Antonina Yakovlevna Kraynyaya, Agnessa Grigor'yevna Leybush, and Anisa Rudol'fovich Yastrebenetskiy

Metody raschetov po tekhnologii svyazannogo azota (Computational Methods in the Technology of Combined Nitrogen) Khar'kov, Izd-vo Khar'kovskogo univ., 1960. 302 p. 5,000 copies printed.

Ed. (Title page): V.I. Atroshchenko; Ed.: D.A.Vaynberg; Tech. Ed.: V.S Zadorozhyy.

PURPOSE: This textbook is intended for graduate students in chemical technology institutes, and may also be used by engineering and technical personnel of the chemical industry.

COVERAGE: The book describes computational methods used in the industrial production of hydrogen, nitrogen, synthetic ammonia, urea, nitric acid, and methanol. Problems in the refining of natural gas are also reviewed. The computations involve material and heat balances and the determination of

Card 1/5

Computational Methods (Cont.) SOV/56-34

dimensions of equipment and its design, based on equations of chemical reactions and thermodynamic computations of possible yields or reaction rates per se. Equations and formulae for determining reaction rates are also given. Plant outputs, flow sheets, and technical characteristics are included. The supplement includes an equilibrium state (vapor phase) diagram of a nitrogen-oxygen system; entropy diagrams for ammonia, air, nitrogen, and oxygen; graph. of heat capacity, viscosity, and heat conductance vs. temperature (0 - 350° C) for nitrogen-hydrogen-ammonia mixtures at P = 300 atm; a viscosity vs. percentage composition graph of CO + H_2 mixture at 50 - 400° C; diagrams of CH_4, CO_2, CO, N_2, and H_2 solubility in CH_3OH at 300 atm and 25° C; a compressibility coefficient vs. temperature (25 - 250° C) graph of CO + 2 H_2 mixtures at 250 and 300 atm; a nomogram of physical constants; enthalpy vs. temperature diagrams for alcohols, olefins and methanol; and tables of rate constants, partial pressures, heat contents of solutions, viscosities of gases, average molecular heat capacities of various gases and vapors at different pressures, rate constants of the oxidation of nitric oxide by oxygen at different temperatures, etc. The authors are affiliated with the Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina (Khar'kov Polytechnic Institut imeni V.I. Lenin) and the Gosudarstvennyy institut azotnoy

Card 2/3

Computational Methods (Cont.) SOV/5604

promyshlennosti i produktov organicheskogo sinteza (State Institute for the Nitrogen Industry and Products of Organic Synthesis). The Introduction and Chs. V, X, and XI were written by V.I. Atroshchenko; Ch. I, by A.G. Leybush; Chs. II, III, VI, and VII, by A.R. Yastrebenetskiy; Ch. IV, by I.I. Gel'perin; Chs. VIII and XIV, by V.I. Komarov; Chs. IX and XIII, by A.F. Zasorin; and Ch. XII, by A. Ya. Kravtsyaya. No personalities are mentioned. References, mainly Soviet, accompany individual chapters.

TABLE OF CONTENTS:

Card 3/5

YASTREBENETSKIY, A.R.; KOVALENKO, L.M.; MUKHIN, I.N.; TOVAZHNYANSKIY, L.L.

Cooling of the tar liquor in plate heat exchangers. Koks i khim. no.3: 38-41 '63. (MIRA 16:3)

1. Khar'kovskiy politekhnicheskiy institut.
(Heat exchangers) (Coal tar products--Cooling)

YASTREBENETSKIY, A.R., kand.tekhn.nauk; KOVALENKO, L.M., kand.tekhn.nauk

Useful bock on sectional plate heat exchangers. Khim.mashinostr. no.6: 44 N-D '63. (MIRA 17:2)

TOVAZHNYANSKIY, L.L. [Tovazhnians'kyi, L.L.]; KOVALENKO, L.M.; YASTREBENETSKIY, A.R. [IAstrebenets'kyi, A.R.]

Studying the heat transfer in vapor condensation in the channels of plate heat exchangers. Khim.prom. [Ukr.] no.2:40-41 Ap-Je '65. (MIRA 18:6)

ATROSHCHENKO, Vasiliy Ivanovich; ALEKSEYEV, Arkadiy Mefodiyevich; ZASORIN, Anatoliy Petrovich; KIRILLOV, Ivan Petrovich; KONVISAR, Viktor Ivanovich; YASTREBENETSKIY, Anisim Rudol'fovich; VVEDENSKIY, P.I., prof., retsenzent; VARLAMOV, M.L., prof., retsenzent; BAZILYANSKAYA, I.L., red.; TROFIMENKO, A.S., tekhn. red.

[Technology of combined nitrogen] Tekhnologiia sviazannogo azota [By] V.I.Atroshchenko i dr. Khar'kov, Izd-vo Khar'kovskogo univ. 1962. 322 p. (MIRA 17:1)

AUTHORS: Kosharskiy, B. D., Engineer, Krassov, I. M., Candidate of Technical Sciences, Shliozberg, Yu. A., Engineer, Yastrebenetskiy, M. A., Engineer

S/119/60/000/04/011/014
B014/B008

TITLE: Jet Generators for Pressure Vibrations

PERIODICAL: Priborostroyeniye, 1960, Nr 4, pp 27-29 (USSR)

ABSTRACT: Technical data on jet generators for pressure vibrations which are designed for the recording of the dynamic characteristic of pneumatic[3] and hydraulic controllers[3] of industrial installations, are given in the paper under review. The generators described here were built up from mass products by the "Teploavtomat" Works of the Khar'kovskiy sovnarkhoz (Khar'kov sovnarkhoz). Transformer oil is the working substance. The single-stage hydraulic amplifiers 1 and 2 are shown in figure 1. The jet tube is turned periodically to the side by a rotating eccentric, whereby the pressure in a nozzle connected with the element to be investigated depends on the position of the jet tube. A return coupling device is provided in type A (Fig 1a) to ensure the proportionality between the movement of the coupling rod and the position of the jet tube. In type B (Fig 1b) a spring is provided for the balancing of the kinematic system and for adjusting. The relation between the displacement

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of the jet tube and the movement of the coupling rod is described by formula (1). B-type generators can be used for oscillation amplitudes of from 20 mm water column up to 3 kg/cm^2, and the oscillograms of 2 oscillations with amplitudes of 55 mm water column and of 1.3 kg/cm^2 are given in figure 2. The amplitude-frequency characteristic is shown in figure 3. It is finally pointed out that these jet generators can be used for hydraulic and pneumatic computers as well as for "extreme controllers". There are 3 figures and 4 Soviet references.

YASTREBENETSKIY, M.A. [IAstrebenets'kyi, M.A.] (Khar'kov)

Region of the linearity of the characteristics of a nonlinear automatic control system. Avtomatyka 10 no.1:42-48 '65. (MIRA 18:6)

SOLYANIK, B.L., inzh.; YASTREBENETSKIY, M.A., kand. tekhn. nauk; KOMAROV, G.P., inzh.

Determination of the reliability of automatic regulators under operational conditions in thermal electric power plants. Teploenergetika 12 no.4:29-32 Ap '65. (MIRA 18:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii i Khar'kovskoye upravleniye energokhozyaystva.

26237
S/119/61/000/008/003/008
D215/D302

38,1000 (1068,1089)

AUTHORS: Motulevich, D.Yu., and Yastrebenetskiy, M.A.

TITLE: A comparison between hydraulic and electrohydraulic controllers of "Teploavtomat" manufacture

PERIODICAL: Priborostroyeniye, no. 8, 1961, 6 - 8

TEXT: The electrohydraulic have the following advantages over the hydraulic controllers: transmitter, controller, and actuator can be separated, whereas in hydraulic controllers the transmitter is mechanically coupled with the hydraulic amplifier and the horizontal distance between the amplifier and the actuator is limited to 100-120 m, and the vertical distance to 30-35 m; the controller can operate with a number of transmitters having an electric output smaller in size than its hydraulic counterpart; in certain electrohydraulic controllers the oil supply system, the amplifier and the actuator are built into one single unit. The only disadvantage of the electro hydraulic system is its complexity. Both, hydraulic

Card 1/4

A comparison between hydraulic ...

and electro-hydraulic integral controllers have good dynamic properties. The transfer function of an I-controller is $W_I(p) = S/P$, where S - gain of I controller. In the case of the electro-hydraulic controller type APK-1 (ARK-1) S_{max} = 50.4 mm/sec. W for d.d. input signals. The transfer function of a proportional hydraulic and electrohydraulic controller in the frequency range up to 3 rad/sec. is $W_I(p) = -(k/T_p + 1)$, where k - gain of P-controller; T - time constant of balast link. The gain of a hydraulic controller can be varied by adjusting the transmission ratio of the mechanical feedbacks rod. The gain of an electro hydraulic controller is determined by the value of feedback voltage and can vary between 0.195 and infinity. The tranfer function of an (P + I) controller in the range of frequencies up to 2 rad/sec. is given by

$$W_{P+I}(p) = -\frac{k(T_i p + 1)}{T_i p\,(1 + S + ST_i p)},$$

Card 2/4

A comparison between hydraulic ...

where T_i - time of isodrome; S - coefficient representing the deviation of frequency response characteristics of an actual proportional plus integral controller from that of an ideal (P + I) controller. The limits of variation of gain K in (P + I) controllers are correspondingly the same as in P controllers. The magnitude of the isodrome line is determined by the position of the damper throttle valve T_i max $\leq$ 30 sec. When the opening of the damper valve is less than 90° the values of T_i are widely spread and hence the isodrome performance is unstable. When the valve opening exceeds 360°, the system becomes practically an I-controller. In electro-hydraulic controllers the differentiating link is represented by the RC network ($T_i = R_1C_1$). The limits of variation of T_i are 20 to 500 sec. When the moving part of the actuator reaches the limiter, the feedback signal drops. With the change of sign of input signal the magnitude of travel of the actuator is smaller than it would have been without mechanical limiters. The electro-

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26237
S/119/61/000/008/003/008
D215/D302

A comparison between hydraulic ...

hydraulic controllers made by 'Teploavtomat' have many advantages and a wider field of application than the hydraulic types. There are 3 figures and 3 Soviet-bloc references.

Card 4/4

MOTULEVICH, D.Yu.; YASTREBENETSKIY, M.A.

Modern foreign electrohydraulic regulators (survey). Pritoro-stroenie no.10:20-25 O '61. (MIRA 14:9)
(Electric controllers) (Hydraulic control)

AUTHOR: Yastrebenetskiy, N. O. [illegible] Yastrebenetskiy, M. A. Kharkiv

SOURCE: Avtomatyka, no. 1, 1965, 42-48

TOPIC TAGS: automatic control, automatic control design, automatic control system, automatic control theory

ABSTRACT: A region, in the coordinates of input-signal amplitude and frequency parameters, where the [illegible] characteristics of a nonlinear automatic [illegible] ACS) are sufficiently close to those of a linear ACS model, is called the "linearity region". Within this region, the nonlinear ACS can be calculated by linear methods. A method is given for calculating the linearity region in an ACS that has a symmetrical single-valued nonlinearity. Examples of [illegible] linearity regions are given for two controllers: [illegible] a dead zone in the actuating mechanism and [illegible] integrating controller with a saturable [illegible]. The article has 4 figures and 29 formulas.

Card 1/2

ACCESSION NR: AP4011300

ASSOCIATION: none

SUBMITTED: 03Jul63

ENCL: 00

SUB CODE: IE

NO REF SOV: 007

OTHER: 000

Card 2/2

MARIKHIN, V.A.; SLUTSKER, A.I.; YASTREBINSKIY, A.A.

Intensity variation in small-angle X-ray diffraction in polymer contrasting. Fiz. tver. tela 7 no.2:441-445 F '65.

(MIRA 18:8)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

[redacted]

[redacted] of polymers

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 441-445

[redacted]

ABSTRACT: [redacted]

ensure uniform absorption of iodine over the volume of the polymer. The samples

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L 38[illegible]

ACCESSION NR: AP5005279

were then dried and small-angle diffraction measurements were made in apparatus described by the authors elsewhere [illegible]

Card 2/2

ZHURKOV, S.N.; SLUTSKER, A.I.; YASTREBINSKIY, A.A.

Interrelation of the elastic deformation and structure of oriented polymers. Fiz. tver. tela 6 no.12:3601-3607 D '64 (MIRA 18:2)

1. Fiziko-tekhnicheskiy institut imeni Ioffe AN SSSR, Leningrad.

YASTREBINSKIY, M.A., gornyy inzh.

Investigating the advantageous overburden disposal in dump piles in strip mines of the Mikhaylovka Iron Ore Combine in the Kursk Magnetic Anomaly using the linear programming method. Nauch. trudy Mosk. inst. radioelek. i gor. elektromekh. no.47:136-142 '63. (MIRA 17:6)

NARZULLAYEV, B.N.; YASTREBINSKIY, A.A.

Investigation of the effect of high loading rates on the durability of solids. Uch.zap.Tadzh.un. 18:95-102 '58. (MIRA 14:7)
(Strength of materials)

S/181/62/004/009/027/045
B101/B186

AUTHORS: Marikhin, V. A., Slutsker, A. I., and Yastrebinskiy, A. A.

TITLE: Study of the structure of oriented polyethylene terephthalate (Lavsan)

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2534-2538

TEXT: The nature of the strength of oriented polyethylene terephthalate (Lavsan) was investigated by combining electron microscopy with small-angle x-ray scattering, on the assumption that the supermolecular structure affects the mechanical properties of polymers. High-crystalline Lavsan specimens measuring 100·8·1.5 mm were oriented by subjecting them to an elongation of 430% at 150°C. For the electron-microscopic study, specimens were split in liquid nitrogen along the elongation axis, and platinum-quartz replicas of the split surface were photographed in the electron microscope with a magnification of 20,000. The surface was found to consist of bead-shaped fibrils oriented in parallel to the elongation axis. The distance between the "bead" centers was 700-800 Å. These results were confirmed by measurement of small-

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Study of the structure of oriented ...

angle scattering. The chamber was evacuated, the measurement was carried out with CuK_α radiation, $\lambda = 1.54$ Å. Maximum scattering was observed at 7.2' with an intensity of 0.06 p/sec, with a primary beam intensity of $2.5 \cdot 10^5$ p/sec. Under these conditions repeated measurements, were necessary in order to determine the maximum, particularly of the "control points" at 5.5, 7.0, and 8.5'. From $\varphi_{max} = 7.2' = 2.09 \cdot 10^{-3}$ rad, the iterative period of the diffraction centers was calculated, equalling 740 Å. These results obtained by two methods confirm more specifically the assumption of alternating zones of heterogeneity, of the order of several 100 Å being present in oriented polymers. There are 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: May 10, 1962

Card 2/2

ZHURKOV, S.N.; SLUTSKER, A.I.; YASTREBINSKIY, A.A.

Effect of loading on the supermolecular structure of oriented polymers. Dokl. AN SSSR 153 no.2:303-305 N '63. (MIRA 16:12)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR.
2. Chlen-korrespondent AN SSSR (for Zhurkov).

L 07888-67 EWT(d)/EWT(m)/EWP(k)/EWP(h)/EWP(l)/EWP(v) DJ/GD
ACC NR: AT6021734 (A) SOURCE CODE: UR/0000/65/000/000/0116/0122

AUTHOR: Gol'drin, V. M.; Yastrebenetskiy, M. A.

ORG: none

TITLE: Dynamic characteristics of the electro-hydraulic controller with hydraulic drive AGP-1

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Pnevmoavtomatika (Pneumatic automation). Moscow, Izd-vo Nauka, 1966, 116-122

TOPIC TAGS: hydraulic device, hydraulic equipment, electrohydraulic controller, automatic control theory

ABSTRACT: The authors describe a new electro-hydraulic controller which incorporates an electromechanical converter, a two-stage hydraulic amplifier with needle and follower valves, a hydraulic prime mover, a feedback mechanism, and a number of auxiliary systems. The block diagram of the control system is shown in figure 1. The input signal U_i is fed into the measuring unit *1*, amplified and demodulated in the ac amplifier-demodulator *2*, then compared to the dc feedback signal at the summing junction. The dc error signal is amplified in *3* and used to drive the electromechanical converter *4* (based on electromagnets). This converter in turn actuates hydraulic amplifier *5*, which drives hydraulic prime mover *6*. The feedback loop consists of feedback transduc-

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ACC NR: AT6021734

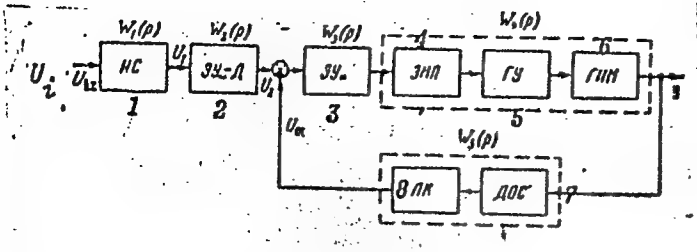

Fig. 1.

er 7, and RC network 8. The controller can be operated in derivative, integrating, and derivative-integrating modes. The configuration of the feedback loop determines the mode of operation. The transfer functions for each mode of operation are derived and the performance is analyzed. Test results are plotted for various values of components. Orig. art. has: 5 figures, 26 formulas.

SUB CODE: 13,14/ SUBM DATE: 03Feb66/ ORIG REF: 005

Card 2/2 gd

YASTREBINSKIY, M.A., inzh.

Method of linear programming for determining the efficient use of excavators. Izv. vys. ucheb. zav.; gor. zhur. 7 no.5:53-59 '64. (MIRA 17:12)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki. Rekomendovana kafedroy vysshey matematiki, matematicheskikh mashin i programmirovaniya.

RABINOVICH, S.M., dotsent; YASTREBINSKIY, N.A.

Averaging ores in the process of open-pit mining by the method of linear programming. Nauch. trudy Nosk. inst. radioelek. i gor. elektromekh. no. 49 pt. 2:210-213 '64 (MIRA 19:1)

RZHEVSKIY, Vladimir Vasil'yevich, prof., doktor tekhn. nauk; ISTOMIN, Viktor Vladimirovich, gornyy inzh.; YAMSHCHIKOV, Valeriy Sergeyevich, gornyy inzh.; Prinimali uchastiye: YASTREBINSKIY, M.A., gornyy inzh.; LEBEDKOVA, A.A., gornyy inzh.; OVCHINNIKOV, V.A., gornyy inzh.

[Technology and the overall mechanization of the open pit mining of coal, ore, and rock products] Tekhnologiia i kompleksnaia mekhanizatsiia otkrytoi dobychi uglia, rud i nerudnykh iskopaemykh. Moskva, Mosk. in-t radioelektroniki i gornoi elektromekhaniki. No.6. Pt.1. 1963. 151 p. (MIRA 17:8)

ACC NR: AP7001823 (A,N) SOURCE CODE: UR/0119/66/000/012/0010/0011

AUTHOR: Gol'drin, V. M. (Engineer); Yastrebenetskiy, M. A. (Candidate of technical sciences)

ORG: none

TITLE: Some results of an experimental investigation of reliability of hydraulic regulators

SOURCE: Priborostroyeniye, no. 12, 1966, 10-11

TOPIC TAGS: hydraulic device, reliability

ABSTRACT: The reliability of general-purpose hydraulic regulators whose performance was logged during 1964-65 is reported. Installed in 1954-57 on the soaking pits of rolling mills were 40 two-stage (jet and slide valve) regulators at an "M1" metallurgical combine and 17 single-stage (jet only) regulators at an

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ACC NR: AP7001823

"M2" combine. The regulator reliability is characterized by these figures:

	Time of operation 1000 hrs	Number of failures	Mean time between failures, hrs	Failure rate 10^{-6} per hr
M1	356	46	7740	12.9
M2	695	65	10700	9.35
Total	1051	111	9500	10.6

Amplifiers and measuring devices were responsible for most failures. Failure rate of the above simple hydraulic regulators was considerably lower than that of electric temperature regulators also operating at "M2." Details of failures are tabulated. Orig. art. has: 2 tables.

SUB CODE: 13, 14 / SUBM DATE: none / ORIG REF: 001

Card 2/2

ACC NR: AP7002007 (A) SOURCE CODE: UR/0110/66/000/012/00[illegible]/00[illegible]

AUTHOR: Yastrebenetskiy, M. A. (Candidate of technical sciences); Solyanik, B. L. (Engineer)

ORG: none

TITLE: Reliability of industrial automation equipment

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 12, 1966, 41-44

TOPIC TAGS: reliability, automatic control reliability, industrial automation, automatic regulation

ABSTRACT: Methods are set forth of collecting and processing data on reliability of automatic regulators and measuring instruments at large metallurgical and power plants. Special trouble logs and repair logs are recommended for recording all equipment failures and repairs. Also, a list of installed equipment (dates of manufacture and installation, operating conditions) and operating-time records should be made available for reliability-calculation purposes. Dependent primary failures should be combined with secondary failures wherever possible in order to make the flow of failures ordinary. If observation conditions are stable, equipment operates at room temperature, and the quantity of equipment is constant, the flow of failures may be regarded as Poisson-type. The concepts of the rate of failure, failure dispersion, mean time between failures, confidence interval, statistical veracity, repair time, and repairability are explained; simple formulas and curves for estimating these reliability characteristics are given. Orig. art. has: 2 figures, 11 formulas, and 1 table.

Card 1/1 SUB CODE: 13, 09, 14/SUBM DATE: none UDC: 66.05.002.5:62.19

YASTREBKOV, A.A.

Individual and intrapopulation variability in the size of eggs of Oncorhynchus gorbuscha and Oncorhynchus keta. Trudy MMBI no.9:26-32 '65. (MIRA 18:12)

SERGEYEV, R.S.; PERMITIN, I.Ye.; YASTREBKOV, A.A.

Fertility of fishes in Rybinsk Reservoir. Trudy Biol.sta."Borok" no.2:278-300 '55. (MIRA 9:6)
(Rybinsk Reservoir--Fishes)

YASTREBKOV, A. A.

YASTREBKOV, A.A.

Siberian cod [Eleginus navaga) of the Pechora Bay. Trudy MMBI no.5:125-142 '64. (MIRA 17:4)

1. Laboratoriya biologicheskikh osnov akklimatizatsii promyslovykh organizmov (zav. - L.I.Vasil'yev) Murmanskogo morskogo biologicheskogo instituta.

Oct 53

YASTREBOV, A. F.

USSR/Medecine - Epidemic Hepatitis

"Data on the Regional Epidemiology of Botkin's Disease /Epidemic Hepatitis/,"
A. F. Yastrebov, Tomsk Inst of Vaccines and Sera

Zhur Mikr Epid i Immun, No 10, p 85.

The highest incidence of epidemic hepatitis was observed among patients at a children's hospital and inmates of a children's home. In curing individual cases of the disease, the diagnostic value of the methylene blue test was confirmed. Epidemic hepatitis affects primarily inhabitants of cities. Infection could not have been caused by inoculations.

266 T26

504. DATA ON REGIONAL EPIDEMIOLOGY OF POLIOMYELITIS (Russian text) - Yastrebov A. F. - VOPR. VIRUSOL. 1958, 2 (109-110)

The report is based on information collected over the period 1949-1955. The highest incidence of poliomyelitis was in town A, with the greatest morbidity in September. An unusually high incidence occurred in one section of the city, where water from a polluted well was used. As a whole, morbidity varied from 0.5 to 18.1 per 1000 inhabitants in different cities, whereas the fatality ranged from 3.6 to 11.3%. Anigstein - Galveston, Tex. (L, 17)

Tomsk Sci Res Inst
Vaccines + Sera.

YASTREBOV, A. F.

"Data on the regional pathology of poliomyelitis."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

YASTREBOV, A.F. (Tomsk, ul. Krylova, d.55, kv. 1)

Studies on regional features of the occurrence of malignant tumors. (MIRA 12:12)
Vop.onk. 5 no.4:476-480 '59.

1. Serum and Vaccine Research Institute, Tomsk.
(NEOPLASMS, statist.
in Russia, regional distribution (Rus))